

EXHIBIT 13

EXHIBIT 13

The following tables compare claim 20 of U.S. Patent 8,630,234 (“the ’234 Patent”) and claim 38 of U.S. Patent 10,880,721 (“the ’721 Patent”) against allegedly representative claims considered in *Voip-Pal.Com, Inc. v. Apple Inc.*, 375 F. Supp. 3d 1110 (N.D. Cal. 2019)) and 411 F. Supp. 3d 926 (N.D. Cal. 2019) and claims identified by Defendants.

- A. ’234 Patent, claim 20 vs. ’606 Patent, claim 8: *see* 5:20-cv-02460, Dkt. 1 at ¶¶27, 35; 5:21-cv-05110, Dkt. 1 at ¶¶21, 68
- B. ’721 Patent, claim 38 vs. ’606 Patent, claim 8: *see* 5:20-cv-02460, Dkt. 1 at ¶¶27, 35; 5:21-cv-05110, Dkt. 1 at ¶¶21, 68
- C. ’234 Patent, claim 20 vs. ’606 Patent, claim 15: *see* 5:20-cv-02460, Dkt. 1 at ¶¶27, 35; 5:21-cv-05110, Dkt. 1 at ¶¶21, 68
- D. ’721 Patent, claim 38 vs. ’606 Patent, claim 15: *see* 5:20-cv-02460, Dkt. 1 at ¶¶27, 35; 5:21-cv-05110, Dkt. 1 at ¶¶21, 68
- E. ’234 Patent, claim 20 vs. ’872 Patent, claim 30: *see* 5:20-cv-02460, Dkt. 1 at ¶¶28, 46; 5:21-cv-05110, Dkt. 1 at ¶¶21, 68
- F. ’721 Patent, claim 38 vs. ’872 Patent, claim 30: *see* 5:20-cv-02460, Dkt. 1 at ¶¶28, 46; 5:21-cv-05110, Dkt. 1 at ¶¶21, 68
- G. ’234 Patent, claim 20 vs. ’815 Patent, claim 1: *see* 375 F. Supp. 3d 1110 (N.D. Cal. 2019) at pp.6-7
- H. ’234 Patent, claim 20 vs. ’005 Patent, claim 74: *see* 375 F. Supp. 3d 1110 (N.D. Cal. 2019) at pp.7-8
- I. ’234 Patent, claim 20 vs. ’002 Patent, claim 1: *see* 411 F. Supp. 3d 926 (N.D. Cal. 2019) at pp.19-23
- J. ’234 Patent, claim 20 vs. ’002 Patent, claim 26: *see* 411 F. Supp. 3d 926 (N.D. Cal. 2019) at pp.27-29
- K. ’234 Patent, claim 20 vs. ’549 Patent, claim 9: *see* 411 F. Supp. 3d 926 (N.D. Cal. 2019) at pp.23-27
- L. ’234 Patent, claim 20 vs. ’762 Patent, claim 21: *see* 411 F. Supp. 3d 926 (N.D. Cal. 2019) at pp.29-31
- M. ’721 Patent, claim 38 vs. ’815 Patent, claim 1: *see* 375 F. Supp. 3d 1110 (N.D. Cal. 2019) at pp.6-7
- N. ’721 Patent, claim 38 vs. ’005 Patent, claim 74: *see* 375 F. Supp. 3d 1110 (N.D. Cal. 2019) at pp.7-8
- O. ’721 Patent, claim 38 vs. ’002 Patent, claim 1: *see* 411 F. Supp. 3d 926 (N.D. Cal. 2019) at pp.19-23
- P. ’721 Patent, claim 38 vs. ’002 Patent, claim 26: *see* 411 F. Supp. 3d 926 (N.D. Cal. 2019) at pp.27-29
- Q. ’721 Patent, claim 38 vs. ’549 Patent, claim 9: *see* 411 F. Supp. 3d 926 (N.D. Cal. 2019) at pp.23-27
- R. ’721 Patent, claim 38 vs. ’762 Patent, claim 21: *see* 411 F. Supp. 3d 926 (N.D. Cal. 2019) at pp.29-31

Claim elements which do not appear to correspond to anything in the claim being compared are labeled as “[n/a]” (“not applicable”).

Yellow represents elements in the ’234 or ’721 patent claims that are not present in the allegedly representative claims or the claims identified by Apple.

Red represents elements in the allegedly representative claims or the claims identified by Defendants that are not present in the ’234 or ’721 patent claims.

| A. U.S. Patent 8,630,234, Claim 20 (see '234 Patent at 36:29-56) | A. Claim 8 of U.S. Patent 10,218,606 ("the '606 Patent") (see '606 Patent at 37:30-38:3, 38:46-62) |
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| 20. A mobile telephone apparatus comprising: | [N.B.: Claim 8 incorporates claim 1:] 1. A method for routing communications in a packet switched communication system between a first participant device associated with a first participant and a second participant device associated with a second participant, the first and second participant devices being associated with first and second network elements of the communication system, respectively, the method comprising: |
| a processor circuit; | [see below] |
| a network interface in communication with said processor circuit; and | [n/a] |
| a computer readable medium in communication with said processor circuit and encoded with codes for directing said processor circuit to: | [n/a] |
| receive, from a user of the mobile telephone, a callee identifier associated with the callee; | receiving, by at least one processor, a second participant identifier associated with the second participant device, in response to initiation of a communication from the first participant device to the second participant device, the first participant device being associated with a first participant identifier; |
| cause an access code request message to be transmitted to an access server to seek an access code from a pool of access codes wherein each access code in said pool of access codes identifies a respective telephone number or Internet Protocol (IP) network address that enables a local call to be made to call the callee | [n/a] |

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| identified by the callee identifier, said access code request message including said callee identifier and a location identifier separate and distinctive from said callee identifier, said location identifier identifying a location of the mobile telephone; | |
| receive an access code reply message from the access server in response to said access code request message, said access code reply message including an access code different from said callee identifier and associated with said location identifier and/or associated with a location pre-associated with the mobile telephone and wherein said access code expires after a period of time; and | [n/a] |
| [n/a] | causing the at least one processor to access at least one memory storing a first participant profile identifying at least one first participant attribute; |
| [n/a] | processing the second participant identifier and the at least one first participant attribute, using the at least one processor, to produce a new second participant identifier based on at least one match between the second participant identifier and the at least one first participant attribute; |
| [n/a] | processing the new second participant identifier, using the at least one processor, to determine whether the second network element is the same as the first network element; |
| initiate a call using said access code to identify the callee. | [n/a] |
| [n/a] | when the second network element is determined to be the same as the first network element, producing a routing message identifying a first network address associated with the first network element, using the at least one processor; and |

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| [n/a] | when the second network element is determined not to be the same as the first network element, producing a routing message identifying a second network address associated with the second network element, using the at least one processor; |
| [n/a] | wherein the packet switched communication system attempts to establish the communication from the first participant device to the second participant device based on at least one network address identified in the routing message. |
| [n/a] | 8. The method of claim 1 further comprising: (a) updating a database to cause at least one user-specific first participant attribute to be modified; |
| [n/a] | (b) wherein the second participant identifier identifies a device in communication with a public switched telephone network (PSTN). |
| [n/a] | (c) wherein the communication comprises a video or audio call, |
| [n/a] | (d) wherein the packet switched communication system, including the first and second network elements, form a private network operably configured to provide communication services to subscribers thereof, and |
| [n/a] | (e) wherein the at least one network element of the communication system comprises a call controller operable to establish the video or audio call to the second participant device in response to the routing message. |

| B. '721 Patent, Claim 38 (see '721 Patent at 38:10-40) | B. Claim 8 of U.S. Patent 10,218,606 ("the '606 Patent") (see '606 Patent at 37:30-38:3, 38:46-62) |
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| <p>38. A wireless apparatus comprising:</p> | <p><i>[N.B.: Claim 8 incorporates claim 1:]</i></p> <p>1. A method for routing communications in a packet switched communication system between a first participant device associated with a first participant and a second participant device associated with a second participant, the first and second participant devices being associated with first and second network elements of the communication system, respectively, the method comprising:</p> |
| a processor circuit comprising at least one processor; | [see below] |
| a network interface in communication with the processor circuit; and | [n/a] |
| a non-transitory computer readable medium having computer executable codes stored thereon for directing the processor circuit to: | [n/a] |
| receive from a user of the wireless apparatus a destination node identifier associated with a destination node with which the user wishes to communicate; | receiving, by at least one processor, a second participant identifier associated with the second participant device, in response to initiation of a communication from the first participant device to the second participant device, the first participant device being associated with a first participant identifier; |
| transmit an access code request message to an access server, the access code request message including the destination node identifier and a location identifier identifying a geographical location of the wireless apparatus; | [n/a] |

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| receive an access code reply message from the access server in response to the access code request message, the access code reply message including an access code based on the location identifier in the access code request message, the access code identifying a communications channel on a gateway through which communications between the wireless apparatus and the destination node can be conducted, the access code being distinct from the destination node identifier; and | [n/a] |
| [n/a] | causing the at least one processor to access at least one memory storing a first participant profile identifying at least one first participant attribute; |
| [n/a] | processing the second participant identifier and the at least one first participant attribute, using the at least one processor, to produce a new second participant identifier based on at least one match between the second participant identifier and the at least one first participant attribute; |
| [n/a] | processing the new second participant identifier, using the at least one processor, to determine whether the second network element is the same as the first network element; |
| initiate communications from the wireless apparatus, via the network interface, using the access code based on the location identifier, to establish communications between the wireless apparatus and the destination node through the communications channel identified by the access code. | [n/a] |
| [n/a] | when the second network element is determined to be the same as the first network element, producing a routing message identifying a first network address associated with the first network element, using the at least one processor; and |

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| [n/a] | when the second network element is determined not to be the same as the first network element, producing a routing message identifying a second network address associated with the second network element, using the at least one processor; |
| [n/a] | wherein the packet switched communication system attempts to establish the communication from the first participant device to the second participant device based on at least one network address identified in the routing message. |
| [n/a] | 8. The method of claim 1 further comprising: (a) updating a database to cause at least one user-specific first participant attribute to be modified, |
| [n/a] | (b) wherein the second participant identifier identifies a device in communication with a public switched telephone network (PSTN). |
| [n/a] | (c) wherein the communication comprises a video or audio call, |
| [n/a] | (d) wherein the packet switched communication system, including the first and second network elements, form a private network operably configured to provide communication services to subscribers thereof, and |
| [n/a] | (e) wherein the at least one network element of the communication system comprises a call controller operable to establish the video or audio call to the second participant device in response to the routing message. |

| C. U.S. Patent 8,630,234, Claim 20 (see '234 Patent at 36:29-56) | C. Claim 15 of U.S. Patent 10,218,606 ("the '606 Patent") (see '606 Patent at 37:30-38:3, 39:22-38) |
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| 20. A mobile telephone apparatus comprising: | [N.B.: Claim 15 incorporates claim 1 and claim 14:] 1. A method for routing communications in a packet switched communication system between a first participant device associated with a first participant and a second participant device associated with a second participant, the first and second participant devices being associated with first and second network elements of the communication system, respectively, the method comprising: |
| a processor circuit; | [n/a] |
| a network interface in communication with said processor circuit; and | [n/a] |
| a computer readable medium in communication with said processor circuit and encoded with codes for directing said processor circuit to: | [n/a] |
| receive, from a user of the mobile telephone, a callee identifier associated with the callee; | receiving, by at least one processor, a second participant identifier associated with the second participant device, in response to initiation of a communication from the first participant device to the second participant device, the first participant device being associated with a first participant identifier; |
| cause an access code request message to be transmitted to an access server to seek an access code from a pool of access codes wherein each access code in said pool of access codes identifies a respective telephone number or Internet Protocol (IP) network address that enables a local call to be made to call the callee | [n/a] |

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| identified by the callee identifier, said access code request message including said callee identifier and a location identifier separate and distinctive from said callee identifier, said location identifier identifying a location of the mobile telephone; | |
| receive an access code reply message from the access server in response to said access code request message, said access code reply message including an access code different from said callee identifier and associated with said location identifier and/or associated with a location pre-associated with the mobile telephone and wherein said access code expires after a period of time; and | [n/a] |
| [n/a] | causing the at least one processor to access at least one memory storing a first participant profile identifying at least one first participant attribute; |
| [n/a] | processing the second participant identifier and the at least one first participant attribute, using the at least one processor, to produce a new second participant identifier based on at least one match between the second participant identifier and the at least one first participant attribute; |
| [n/a] | processing the new second participant identifier, using the at least one processor, to determine whether the second network element is the same as the first network element; |
| initiate a call using said access code to identify the callee. | [n/a] |
| [n/a] | when the second network element is determined to be the same as the first network element, producing a routing message identifying a first network address associated with the first network element, using the at least one processor; and |

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| [n/a] | when the second network element is determined not to be the same as the first network element, producing a routing message identifying a second network address associated with the second network element, using the at least one processor; |
| [n/a] | wherein the packet switched communication system attempts to establish the communication from the first participant device to the second participant device based on at least one network address identified in the routing message. |
| [n/a] | 14. The method of claim 1, wherein the packet switched communication system is controlled by a system operator, the method further comprising: |
| [n/a] | receiving a third participant identifier associated with a third participant device, wherein the third participant device is not associated with either the first network element or the second network element; and |
| [n/a] | producing a routing message identifying a gateway to an external communication system that is not controlled by the system operator, using the at least one processor, to cause a further communication to be established to the third participant device. |
| [n/a] | 15. The method of claim 14 wherein at least a portion of the external communication system is a public switched telephone network (PSTN) communication system, and wherein the third participant identifier comprises a public switched telephone network (PSTN) number. |

| D. '721 Patent, Claim 38 (see '721 Patent at 38:10-40) | D. Claim 15 of U.S. Patent 10,218,606 (“the '606 Patent”) (see '606 Patent at 37:30-38:3, 39:22-38) |
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| 38. A wireless apparatus comprising: | [N.B.: Claim 15 incorporates claim 1 and claim 14:] 1. A method for routing communications in a packet switched communication system between a first participant device associated with a first participant and a second participant device associated with a second participant, the first and second participant devices being associated with first and second network elements of the communication system, respectively, the method comprising: |
| a processor circuit comprising at least one processor; | [see below] |
| a network interface in communication with the processor circuit; and | [n/a] |
| a non-transitory computer readable medium having computer executable codes stored thereon for directing the processor circuit to: | [n/a] |
| receive from a user of the wireless apparatus a destination node identifier associated with a destination node with which the user wishes to communicate; | receiving, by at least one processor, a second participant identifier associated with the second participant device, in response to initiation of a communication from the first participant device to the second participant device, the first participant device being associated with a first participant identifier; |
| transmit an access code request message to an access server, the access code request message including the destination node identifier and a location identifier identifying a geographical location of the wireless apparatus; | [n/a] |

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| receive an access code reply message from the access server in response to the access code request message, the access code reply message including an access code based on the location identifier in the access code request message, the access code identifying a communications channel on a gateway through which communications between the wireless apparatus and the destination node can be conducted, the access code being distinct from the destination node identifier; and | [n/a] |
| [n/a] | causing the at least one processor to access at least one memory storing a first participant profile identifying at least one first participant attribute; |
| [n/a] | processing the second participant identifier and the at least one first participant attribute, using the at least one processor, to produce a new second participant identifier based on at least one match between the second participant identifier and the at least one first participant attribute; |
| [n/a] | processing the new second participant identifier, using the at least one processor, to determine whether the second network element is the same as the first network element; |
| initiate communications from the wireless apparatus, via the network interface, using the access code based on the location identifier, to establish communications between the wireless apparatus and the destination node through the communications channel identified by the access code. | [n/a] |
| [n/a] | when the second network element is determined to be the same as the first network element, producing a routing message identifying a first network address associated with the first network element, using the at least one processor; and |

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| [n/a] | when the second network element is determined not to be the same as the first network element, producing a routing message identifying a second network address associated with the second network element, using the at least one processor; |
| [n/a] | wherein the packet switched communication system attempts to establish the communication from the first participant device to the second participant device based on at least one network address identified in the routing message. |
| [n/a] | 14. The method of claim 1, wherein the packet switched communication system is controlled by a system operator, the method further comprising: |
| [n/a] | receiving a third participant identifier associated with a third participant device, wherein the third participant device is not associated with either the first network element or the second network element; and |
| [n/a] | producing a routing message identifying a gateway to an external communication system that is not controlled by the system operator, using the at least one processor, to cause a further communication to be established to the third participant device. |
| [n/a] | 15. The method of claim 14 wherein at least a portion of the external communication system is a public switched telephone network (PSTN) communication system, and wherein the third participant identifier comprises a public switched telephone network (PSTN) number. |

| E. U.S. Patent 8,630,234, Claim 20 (see '234 Patent at 36:29-56) | E. Claim 30 of U.S. Patent 9,935,872 ("the '872 Patent") (see '872 Patent at 42:11-43:5) |
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| 20. A mobile telephone apparatus comprising: | 30. A communications system comprising a plurality of Internet-connected network elements for routing communications between a plurality of Internet- connected communication devices including first and second participant devices associated with first and second participants, respectively, the first and second participants being registered in at least one communication system database to access communication services through first and second network elements of the system, respectively, the system comprising: |
| <p>a processor circuit;</p> <p>a network interface in communication with said processor circuit; and</p> <p>a computer readable medium in communication with said processor circuit and encoded with codes for directing said processor circuit to:</p> | <p>at least one communications system apparatus comprising at least one processor and at least one computer readable medium with instructions for directing the at least one processor to:</p> |
| <p>receive, from a user of the mobile telephone, a callee identifier associated with the callee;</p> | <p>receiving, by at least one processor, a second participant identifier associated with the second participant device, in response to initiation of a communication from the first participant device to the second participant device, the first participant device being associated with a first participant identifier;</p> |
| <p>cause an access code request message to be transmitted to an access server to seek an access code from a pool of access codes wherein each access code in said pool of access codes identifies a respective telephone number or Internet Protocol (IP) network</p> | [n/a] |

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| address that enables a local call to be made to call the callee identified by the callee identifier, said access code request message including said callee identifier and a location identifier separate and distinctive from said callee identifier, said location identifier identifying a location of the mobile telephone; | |
| receive an access code reply message from the access server in response to said access code request message, said access code reply message including an access code different from said callee identifier and associated with said location identifier and/or associated with a location pre-associated with the mobile telephone and wherein said access code expires after a period of time; and | [n/a] |
| [n/a] | access a database of user profiles, using the first participant identifier, to locate a plurality of first participant attributes associated with the first participant, each user profile associating a respective plurality of attributes with a respective user and identifying an Internet address of a network element at which the respective user of the communication system is registered to access communication services; |
| [n/a] | process the second participant identifier, based on at least one first participant attribute obtained from a user profile using the first participant identifier, to determine whether the communication initiated from the first participant device to the second participant device should be allowed to proceed, and, if the communication is allowed to proceed, to produce a new second participant identifier; |
| [n/a] | determine, based on the new second participant identifier, whether the second participant is registered to access communication services at the same network element as the first participant; |

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| initiate a call using said access code to identify the callee. | [n/a] |
| [n/a] | when the second participant is determined to be registered to access communication services at the same network element as the first participant, produce a routing message identifying a first Internet address associated with the first network element, to cause the communication to be established to the second participant device using the first Internet address; |
| [n/a] | when the second participant is determined not to be registered to access communication services at the same network element as the first participant, produce a routing message identifying a second Internet address associated with the second network element, causing the communication to be established to the second participant device using the second Internet address; and |
| [n/a] | when the communication initiated from the first participant device to the second participant device is determined not to be allowed to proceed, preventing the communication from being established to the second participant device. |

| F. '721 Patent, Claim 38 (see '721 Patent at 38:10-40) | F. Claim 30 of U.S. Patent 9,935,872 ("the '872 Patent") (see '872 Patent at 42:11-43:5) |
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| 38. A wireless apparatus comprising: | 30. A communications system comprising a plurality of Internet-connected network elements for routing communications between a plurality of Internet-connected communication devices including first and second participant devices associated with first and second participants, respectively, the first and second participants being registered in at least one communication system database to access communication services through first and second network elements of the system, respectively, the system comprising: |
| a processor circuit comprising at least one processor; a network interface in communication with the processor circuit; and a non-transitory computer readable medium having computer executable codes stored thereon for directing the processor circuit to: | at least one communications system apparatus comprising at least one processor and at least one computer readable medium with instructions for directing the at least one processor to: |
| receive from a user of the wireless apparatus a destination node identifier associated with a destination node with which the user wishes to communicate; | receiving, by at least one processor, a second participant identifier associated with the second participant device, in response to initiation of a communication from the first participant device to the second participant device, the first participant device being associated with a first participant identifier; |
| transmit an access code request message to an access server, the access code request message including the destination node identifier and a location identifier identifying a geographical location of the wireless apparatus; | [n/a] |

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| receive an access code reply message from the access server in response to the access code request message, the access code reply message including an access code based on the location identifier in the access code request message, the access code identifying a communications channel on a gateway through which communications between the wireless apparatus and the destination node can be conducted, the access code being distinct from the destination node identifier; and | [n/a] |
| [n/a] | access a database of user profiles, using the first participant identifier, to locate a plurality of first participant attributes associated with the first participant, each user profile associating a respective plurality of attributes with a respective user and identifying an Internet address of a network element at which the respective user of the communication system is registered to access communication services; |
| [n/a] | process the second participant identifier, based on at least one first participant attribute obtained from a user profile using the first participant identifier, to determine whether the communication initiated from the first participant device to the second participant device should be allowed to proceed, and, if the communication is allowed to proceed, to produce a new second participant identifier; |
| [n/a] | determine, based on the new second participant identifier, whether the second participant is registered to access communication services at the same network element as the first participant; |
| initiate communications from the wireless apparatus, via the network interface, using the access code based on the location identifier, to establish communications between the wireless | [n/a] |

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| apparatus and the destination node through the communications channel identified by the access code. | |
| [n/a] | when the second participant is determined to be registered to access communication services at the same network element as the first participant, produce a routing message identifying a first Internet address associated with the first network element, to cause the communication to be established to the second participant device using the first Internet address; |
| [n/a] | when the second participant is determined not to be registered to access communication services at the same network element as the first participant, produce a routing message identifying a second Internet address associated with the second network element, causing the communication to be established to the second participant device using the second Internet address; and |
| [n/a] | when the communication initiated from the first participant device to the second participant device is determined not to be allowed to proceed, preventing the communication from being established to the second participant device. |

| G. U.S. Patent 8,630,234, Claim 20 (<i>see</i> '234 Patent at 36:29-56) | G. Allegedly Representative Claim 1 of U.S. Patent 8,542,815 ("the '815 Patent") (<i>see</i> '815 Patent at 36:14-38) |
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| 20. A mobile telephone apparatus comprising: | 1. A process for operating a call routing controller to facilitate communication between callers and callees in a system comprising a plurality of nodes with which callers and callees are associated, the process comprising: |
| a processor circuit; | [n/a] |
| a network interface in communication with said processor circuit; and | [n/a] |
| a computer readable medium in communication with said processor circuit and encoded with codes for directing said processor circuit to: | [n/a] |
| receive, from a user of the mobile telephone, a callee identifier associated with the callee; | in response to initiation of a call by a calling subscriber, receiving a caller identifier and a callee identifier; |
| cause an access code request message to be transmitted to an access server to seek an access code from a pool of access codes wherein each access code in said pool of access codes identifies a respective telephone number or Internet Protocol (IP) network address that enables a local call to be made to call the callee identified by the callee identifier, said access code request message including said callee identifier and a location identifier separate and distinctive from said callee identifier, said location identifier identifying a location of the mobile telephone; | [n/a] |
| receive an access code reply message from the access server in response to said access code request message, said access code reply message including an access code different from said callee identifier and associated with said location identifier and/or | [n/a] |

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| associated with a location pre-associated with the mobile telephone and wherein said access code expires after a period of time; and | |
| [n/a] | locating a caller dialing profile comprising a username associated with the caller and a plurality of calling attributes associated with the caller; |
| [n/a] | determining a match when at least one of said calling attributes matches a portion of said callee identifier; |
| [n/a] | classifying the call as a public network call when said match meets public network classification criteria and classifying the call as a private network call when said match meets private network classification criteria; |
| initiate a call using said access code to identify the callee. | [n/a] |
| [n/a] | when the call is classified as a private network call, producing a private network routing message for receipt by a call controller, said private network routing message identifying an address, on the private network, associated with the callee; |
| [n/a] | when the call is classified as a public network call, producing a public network routing message for receipt by the call controller, said public network routing message identifying a gateway to the public network. |

| H. U.S. Patent 8,630,234, Claim 20 (<i>see</i> '234 Patent at 36:29-56) | H. Allegedly Representative Claim 74 of U.S. Patent 9,179,005 (“the '005 Patent”) (<i>see</i> '005 Patent at 43:41-65) |
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| 20. A mobile telephone apparatus comprising: | 74. A method of routing communications in a packet switched network in which a first participant identifier is associated with a first participant and a second participant identifier is associated with a second participant in a communication, the method comprising: |
| a processor circuit; | [n/a] |
| a network interface in communication with said processor circuit; and | [n/a] |
| a computer readable medium in communication with said processor circuit and encoded with codes for directing said processor circuit to: | [n/a] |
| receive, from a user of the mobile telephone, a callee identifier associated with the callee; | after the first participant has accessed the packet switched network to initiate the communication, |
| [n/a] | using the first participant identifier to locate a first participant profile comprising a plurality of attributes associated with the first participant; |
| cause an access code request message to be transmitted to an access server to seek an access code from a pool of access codes wherein each access code in said pool of access codes identifies a respective telephone number or Internet Protocol (IP) network address that enables a local call to be made to call the callee identified by the callee identifier, said access code request message including said callee identifier and a location identifier separate and distinctive from said callee identifier, said location identifier identifying a location of the mobile telephone; | [n/a] |

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| receive an access code reply message from the access server in response to said access code request message, said access code reply message including an access code different from said callee identifier and associated with said location identifier and/or associated with a location pre-associated with the mobile telephone and wherein said access code expires after a period of time; and | [n/a] |
| initiate a call using said access code to identify the callee. | [n/a] |
| [n/a] | when at least one of the first participant attributes and at least a portion of the second participant identifier meet a first network classification criterion, producing a first network routing message identifying an address in a first portion of the packet switched network, the address being associated with the second participant, the first portion being controlled by an entity; and |
| [n/a] | when at least one of the first participant attributes and at least a portion of the second participant identifier meet a second network classification criterion, producing a second network routing message for receipt by the controller, the second network routing message identifying an address in a second portion of the packet switched network, the second portion not controlled by the entity. |

| I. U.S. Patent 8,630,234, Claim 20 (see '234 Patent at 36:29-56) | I. Allegedly Representative Claim 1 of U.S. Patent 9,826,002 ("the '002 Patent") (see '002 Patent at 37:30-38:2) |
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| 20. A mobile telephone apparatus comprising: | 1. A method of routing a communication in a communication network system between an Internet-connected first participant device associated with a first participant and a second participant device associated with a second participant, the method comprising: |
| a processor circuit; | [see below] |
| a network interface in communication with said processor circuit; and | [n/a] |
| a computer readable medium in communication with said processor circuit and encoded with codes for directing said processor circuit to: | [n/a] |
| receive, from a user of the mobile telephone, a callee identifier associated with the callee; | in response to initiation of the communication by the first participant device, receiving, by a controller comprising at least one processor, over an Internet protocol (IP) network a first participant identifier and a second participant identifier, the second participant identifier being associated with the second participant device; |
| cause an access code request message to be transmitted to an access server to seek an access code from a pool of access codes wherein each access code in said pool of access codes identifies a respective telephone number or Internet Protocol (IP) network address that enables a local call to be made to call the callee identified by the callee identifier, said access code request message including said callee identifier and a location identifier | [n/a] |

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| separate and distinctive from said callee identifier, said location identifier identifying a location of the mobile telephone; | |
| receive an access code reply message from the access server in response to said access code request message, said access code reply message including an access code different from said callee identifier and associated with said location identifier and/or associated with a location pre-associated with the mobile telephone and wherein said access code expires after a period of time; and | [n/a] |
| [n/a] | causing the at least one processor to access a database comprising user profiles, using the first participant identifier, each user profile associating a respective plurality of attributes with a respective user, to locate a plurality of first participant attributes; |
| [n/a] | processing the second participant identifier, using the at least one processor, based on at least one of the plurality of first participant attributes obtained from a user profile for the first participant, to produce a new second participant identifier; |
| [n/a] | classifying the communication, based on the new second participant identifier, as a system communication or an external network communication, using the at least one processor; |
| initiate a call using said access code to identify the callee. | [n/a] |
| [n/a] | when the communication is classified as a system communication, producing a system routing message identifying an Internet address associated with the second participant device, using the at least one processor, wherein the system routing message causes the communication to be established to the second participant device; and |

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| <p>[n/a]</p> | <p>when the communication is classified as an external network communication, producing an external network routing message identifying an Internet address associated with a gateway to an external network, using the at least one processor, wherein the external network routing message causes the communication to the second participant device to be established using the gateway to the external network.</p> |
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| J. U.S. Patent 8,630,234, Claim 20 (see '234 Patent at 36:29-56) | J. Allegedly Representative Claim 26 of U.S. Patent 9,826,002 (see '002 Patent at 42:32-38) |
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| <i>[See above for recital of all the elements of independent Claim 20]</i> | 26. The method of claim 1, further comprising: |
| [n/a] | accessing the database to locate communication blocking information associated with the second participant, using the at least one processor; and |
| [n/a] | blocking the communication when the communication blocking information identifies the first participant identifier. |

| K. U.S. Patent 8,630,234, Claim 20 (see '234 Patent at 36:29-56) | K. Allegedly Representative Claim 9 of U.S. Patent 9,948,549 ("the '549 Patent") (see '549 Patent at 38:48-59) |
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| 20. A mobile telephone apparatus comprising: | [N.B.: Claim 9 of the '549 Patent incorporates Claim 1 by reference] 1. A method of routing a communication in a communication system between an Internet-connected first participant device associated with a first participant and a second participant device associated with a second participant, the method comprising: |
| a processor circuit; | causing at least one processor to access at least one memory storing a first participant profile identifying at least one first participant attribute; |
| a network interface in communication with said processor circuit; and | [n/a] |
| a computer readable medium in communication with said processor circuit and encoded with codes for directing said processor circuit to: | [n/a] |
| receive, from a user of the mobile telephone, a callee identifier associated with the callee; | receiving, by the at least one processor, a second participant identifier inputted by the first participant using the first participant device to initiate a communication, the second participant identifier being associated with the second participant device; |
| cause an access code request message to be transmitted to an access server to seek an access code from a pool of access codes wherein each access code in said pool of access codes identifies a respective telephone number or Internet Protocol (IP) network address that enables a local call to be made to call the callee identified by the callee identifier, said access code request message including said callee identifier and a location identifier | [n/a] |

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| separate and distinctive from said callee identifier, said location identifier identifying a location of the mobile telephone; | |
| receive an access code reply message from the access server in response to said access code request message, said access code reply message including an access code different from said callee identifier and associated with said location identifier and/or associated with a location pre-associated with the mobile telephone and wherein said access code expires after a period of time; and | [n/a] |
| [n/a] | processing the second participant identifier, based on the at least one first participant attribute obtained from the first participant profile, to produce a new second participant identifier; |
| [n/a] | classifying the communication as a system communication or an external network communication; |
| initiate a call using said access code to identify the callee. | [n/a] |
| [n/a] | when the communication is classified as a system communication, producing a system routing message, based on the new second participant identifier, that identifies an Internet Protocol (IP) address of a network element through which the communication is to be routed thereby causing the communication to be established to the second participant device; and |
| [n/a] | when the communication is classified as an external network communication, producing an external network routing message, based on the new second participant identifier, that identifies an address associated with a gateway to an external network thereby causing the communication to the second participant device to be established by use of the gateway to the external network. |

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| | <i>[see claim 1 above, which is incorporated into claims 8-9]</i> |
| [n/a] | <p>8. The method of claim 1, wherein classifying the communication comprises causing the at least one processor to:</p> <p>determine whether a profile associated with the new second participant identifier exists in a database, and when a profile associated with the new second participant identifier does not exist in the database, classify the communication as an external network communication.</p> |
| [n/a] | <p>9. The method of claim 8, wherein, when a profile associated with the new second participant identifier exists in the database, causing the at least one processor to classify the communication as a system communication.</p> |

| L. U.S. Patent 8,630,234, Claim 20 (<i>see</i> '234 Patent at 36:29-56) | L. Allegedly Representative Claim 21 of U.S. Patent 9,537,762 ("the '762 Patent") (<i>see id.</i> at 39:41-40:14) |
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| 20. A mobile telephone apparatus comprising: | 21. A method of routing communications in a system in which a first participant identifier is associated with a first participant registered with the system and wherein a second participant identifier is associated with a second participant, the first participant being associated with a first participant device operable to establish a communication using the system to a second participant device associated with the second participant, the system comprising at least one processor operably configured to execute program code stored on at least one memory, the method comprising: |
| a processor circuit; | [see below] |
| a network interface in communication with said processor circuit; and | [n/a] |
| a computer readable medium in communication with said processor circuit and encoded with codes for directing said processor circuit to: | |
| receive, from a user of the mobile telephone, a callee identifier associated with the callee; | in response to the first participant device initiating the communication to the second participant device, receiving the first participant identifier and the second participant identifier from the first participant device; |
| cause an access code request message to be transmitted to an access server to seek an access code from a pool of access codes wherein each access code in said pool of access codes identifies a respective telephone number or Internet Protocol (IP) network address that enables a local call to be made to call the callee identified by the callee identifier, said access code request | [n/a] |

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| message including said callee identifier and a location identifier separate and distinctive from said callee identifier, said location identifier identifying a location of the mobile telephone; | |
| receive an access code reply message from the access server in response to said access code request message, said access code reply message including an access code different from said callee identifier and associated with said location identifier and/or associated with a location pre-associated with the mobile telephone and wherein said access code expires after a period of time; and | [n/a] |
| initiate a call using said access code to identify the callee. | [n/a] |
| [n/a] | using the first participant identifier to locate, via the at least one processor, a first participant profile from among a plurality of participant profiles that are stored in a database, the first participant profile comprising one or more attributes associated with the first participant; |
| [n/a] | determining a match when at least one of said calling attributes matches a portion of said callee identifier; |
| [n/a] | when at least one of the one or more attributes and at least a portion of the second participant identifier meet a first network classification criterion, producing, via the at least one processor, a first network routing message, the first network routing message identifying an address in the system, the address being associated with the second participant device; |
| [n/a] | when at least one of the one or more attributes and at least a portion of the second participant identifier meet a second network classification criterion, producing, via the at least one processor, a |

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| | second network routing message, the second network routing message identifying an address associated with a gateway to a network external to the system, wherein the second network classification criterion is met if the second participant is not registered with the system; and |
| [n/a] | when at least one of the one or more attributes meets a third network classification criterion, producing, via the at least one processor, an error message and causing prevention of the communication from being established. |

| M. '721 Patent, Claim 38 (see '721 Patent at 38:10-40) | M. Allegedly Representative Claim 1 of U.S. Patent 8,542,815 ("the '815 Patent") (see '815 Patent at 36:14-38) |
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| 38. A wireless apparatus comprising: | 1. A process for operating a call routing controller to facilitate communication between callers and callees in a system comprising a plurality of nodes with which callers and callees are associated, the process comprising: |
| a processor circuit comprising at least one processor; | [n/a] |
| a network interface in communication with the processor circuit; and | [n/a] |
| a non-transitory computer readable medium having computer executable codes stored thereon for directing the processor circuit to: | [n/a] |
| receive from a user of the wireless apparatus a destination node identifier associated with a destination node with which the user wishes to communicate; | in response to initiation of a call by a calling subscriber, receiving a caller identifier and a callee identifier; |
| transmit an access code request message to an access server, the access code request message including the destination node identifier and a location identifier identifying a geographical location of the wireless apparatus; | [n/a] |
| receive an access code reply message from the access server in response to the access code request message, the access code reply message including an access code based on the location identifier in the access code request message, the access code identifying a communications channel on a gateway through which communications between the wireless apparatus and the destination node can be conducted, the access code being distinct from the destination node identifier; and | [n/a] |

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| [n/a] | locating a caller dialing profile comprising a username associated with the caller and a plurality of calling attributes associated with the caller; |
| [n/a] | determining a match when at least one of said calling attributes matches a portion of said callee identifier; |
| [n/a] | classifying the call as a public network call when said match meets public network classification criteria and classifying the call as a private network call when said match meets private network classification criteria; |
| initiate communications from the wireless apparatus, via the network interface, using the access code based on the location identifier, to establish communications between the wireless apparatus and the destination node through the communications channel identified by the access code. | [n/a] |
| [n/a] | when the call is classified as a private network call, producing a private network routing message for receipt by a call controller, said private network routing message identifying an address, on the private network, associated with the callee; |
| [n/a] | when the call is classified as a public network call, producing a public network routing message for receipt by the call controller, said public network routing message identifying a gateway to the public network; |

| N. '721 Patent, Claim 38 (<i>see</i> '721 Patent at 38:10-40) | N. Allegedly Representative Claim 74 of U.S. Patent 9,179,005 ("the '005 Patent") (<i>see</i> '005 Patent at 43:41-65) |
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| 38. A wireless apparatus comprising: | 74. A method of routing communications in a packet switched network in which a first participant identifier is associated with a first participant and a second participant identifier is associated with a second participant in a communication, the method comprising: |
| a processor circuit comprising at least one processor; | [n/a] |
| a network interface in communication with the processor circuit; and | [n/a] |
| a non-transitory computer readable medium having computer executable codes stored thereon for directing the processor circuit to: | [n/a] |
| receive from a user of the wireless apparatus a destination node identifier associated with a destination node with which the user wishes to communicate; | after the first participant has accessed the packet switched network to initiate the communication, |
| [n/a] | using the first participant identifier to locate a first participant profile comprising a plurality of attributes associated with the first participant; |
| transmit an access code request message to an access server, the access code request message including the destination node identifier and a location identifier identifying a geographical location of the wireless apparatus; | [n/a] |
| receive an access code reply message from the access server in response to the access code request message, the access code reply message including an access code based on the location | [n/a] |

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| <p>identifier in the access code request message, the access code identifying a communications channel on a gateway through which communications between the wireless apparatus and the destination node can be conducted, the access code being distinct from the destination node identifier; and</p> | |
| <p>initiate communications from the wireless apparatus, via the network interface, using the access code based on the location identifier, to establish communications between the wireless apparatus and the destination node through the communications channel identified by the access code.</p> | [n/a] |
| [n/a] | <p>when at least one of the first participant attributes and at least a portion of the second participant identifier meet a first network classification criterion, producing a first network routing message identifying an address in a first portion of the packet switched network, the address being associated with the second participant, the first portion being controlled by an entity; and</p> |
| [n/a] | <p>when at least one of the first participant attributes and at least a portion of the second participant identifier meet a second network classification criterion, producing a second network routing message for receipt by the controller, the second network routing message identifying an address in a second portion of the packet switched network, the second portion not controlled by the entity.</p> |

| O. '721 Patent, Claim 38 (see '721 Patent at 38:10-40) | O. Allegedly Representative Claim 1 of U.S. Patent 9,826,002 ("the '002 Patent") (see '002 Patent at 37:30-38:2) |
|---|---|
| 38. A wireless apparatus comprising: | 1. A method of routing a communication in a communication network system between an Internet-connected first participant device associated with a first participant and a second participant device associated with a second participant, the method comprising: |
| a processor circuit comprising at least one processor; | [n/a] |
| a network interface in communication with the processor circuit; and | [n/a] |
| a non-transitory computer readable medium having computer executable codes stored thereon for directing the processor circuit to: | [n/a] |
| receive from a user of the wireless apparatus a destination node identifier associated with a destination node with which the user wishes to communicate; | in response to initiation of the communication by the first participant device, receiving, by a controller comprising at least one processor, over an Internet protocol (IP) network a first participant identifier and a second participant identifier, the second participant identifier being associated with the second participant device; |
| transmit an access code request message to an access server, the access code request message including the destination node identifier and a location identifier identifying a geographical location of the wireless apparatus; | [n/a] |
| receive an access code reply message from the access server in response to the access code request message, the access code reply message including an access code based on the location | [n/a] |

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| <p>identifier in the access code request message, the access code identifying a communications channel on a gateway through which communications between the wireless apparatus and the destination node can be conducted, the access code being distinct from the destination node identifier; and</p> | |
| [n/a] | <p>causing the at least one processor to access a database comprising user profiles, using the first participant identifier, each user profile associating a respective plurality of attributes with a respective user, to locate a plurality of first participant attributes;</p> |
| [n/a] | <p>processing the second participant identifier, using the at least one processor, based on at least one of the plurality of first participant attributes obtained from a user profile for the first participant, to produce a new second participant identifier;</p> |
| [n/a] | <p>classifying the communication, based on the new second participant identifier, as a system communication or an external network communication, using the at least one processor;</p> |
| <p>initiate communications from the wireless apparatus, via the network interface, using the access code based on the location identifier, to establish communications between the wireless apparatus and the destination node through the communications channel identified by the access code.</p> | [n/a] |
| [n/a] | <p>when the communication is classified as a system communication, producing a system routing message identifying an Internet address associated with the second participant device, using the at least one processor, wherein the system routing message causes the communication to be established to the second participant device; and</p> |

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| <p>[n/a]</p> | <p>when the communication is classified as an external network communication, producing an external network routing message identifying an Internet address associated with a gateway to an external network, using the at least one processor, wherein the external network routing message causes the communication to the second participant device to be established using the gateway to the external network.</p> |
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| P. '721 Patent, Claim 38 (see '721 Patent at 38:10-40) | P. Allegedly Representative Claim 26 of U.S. Patent 9,826,002 (see '002 Patent at 42:32-38) |
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| [see above for recital of all the elements of independent Claim 20] | 26. The method of claim 1, further comprising: |
| [n/a] | accessing the database to locate communication blocking information associated with the second participant, using the at least one processor; and |
| [n/a] | blocking the communication when the communication blocking information identifies the first participant identifier. |

| Q. '721 Patent, Claim 38 (see '721 Patent at 38:10-40) | Q. Allegedly Representative Claim 9 of U.S. Patent 9,948,549 ("the '549 Patent") (see '549 Patent at 38:48-59) |
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| 38. A wireless apparatus comprising: | [N.B.: Claim 9 of the '549 Patent incorporates Claim 1 by reference] 1. A method of routing a communication in a communication system between an Internet-connected first participant device associated with a first participant and a second participant device associated with a second participant, the method comprising: |
| a processor circuit comprising at least one processor; | causing at least one processor to access at least one memory storing a first participant profile identifying at least one first participant attribute; |
| a network interface in communication with the processor circuit; and | [n/a] |
| a non-transitory computer readable medium having computer executable codes stored thereon for directing the processor circuit to: | [n/a] |
| receive from a user of the wireless apparatus a destination node identifier associated with a destination node with which the user wishes to communicate; | receiving, by the at least one processor, a second participant identifier inputted by the first participant using the first participant device to initiate a communication, the second participant identifier being associated with the second participant device; |
| transmit an access code request message to an access server, the access code request message including the destination node identifier and a location identifier identifying a geographical location of the wireless apparatus; | [n/a] |
| receive an access code reply message from the access server in response to the access code request message, the access code | [n/a] |

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| reply message including an access code based on the location identifier in the access code request message, the access code identifying a communications channel on a gateway through which communications between the wireless apparatus and the destination node can be conducted, the access code being distinct from the destination node identifier; and | |
| [n/a] | processing the second participant identifier, based on the at least one first participant attribute obtained from the first participant profile, to produce a new second participant identifier; |
| [n/a] | classifying the communication as a system communication or an external network communication; |
| initiate communications from the wireless apparatus, via the network interface, using the access code based on the location identifier, to establish communications between the wireless apparatus and the destination node through the communications channel identified by the access code. | [n/a] |
| [n/a] | when the communication is classified as a system communication, producing a system routing message, based on the new second participant identifier, that identifies an Internet Protocol (IP) address of a network element through which the communication is to be routed thereby causing the communication to be established to the second participant device; and |
| [n/a] | when the communication is classified as an external network communication, producing an external network routing message, based on the new second participant identifier, that identifies an address associated with a gateway to an external network thereby causing the communication to the second participant device to be established by use of the gateway to the external network. |

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| | <i>[see claim 1 above, which is incorporated into claims 8-9]</i> |
| [n/a] | <p>8. The method of claim 1, wherein classifying the communication comprises causing the at least one processor to:</p> <p>determine whether a profile associated with the new second participant identifier exists in a database, and when a profile associated with the new second participant identifier does not exist in the database, classify the communication as an external network communication.</p> |
| [n/a] | <p>9. The method of claim 8, wherein, when a profile associated with the new second participant identifier exists in the database, causing the at least one processor to classify the communication as a system communication.</p> |

| R. '721 Patent, Claim 38 (<i>see</i> '721 Patent at 38:10-40) | R. Allegedly Representative Claim 21 of U.S. Patent 9,537,762 ("the '762 Patent") (<i>see id.</i> at 39:41-40:14) |
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| 38. A wireless apparatus comprising: | 21. A method of routing communications in a system in which a first participant identifier is associated with a first participant registered with the system and wherein a second participant identifier is associated with a second participant, the first participant being associated with a first participant device operable to establish a communication using the system to a second participant device associated with the second participant, the system comprising at least one processor operably configured to execute program code stored on at least one memory, the method comprising: |
| a processor circuit comprising at least one processor; | [see below] |
| a network interface in communication with the processor circuit; and | [n/a] |
| a non-transitory computer readable medium having computer executable codes stored thereon for directing the processor circuit to: | |
| receive from a user of the wireless apparatus a destination node identifier associated with a destination node with which the user wishes to communicate; | in response to the first participant device initiating the communication to the second participant device, receiving the first participant identifier and the second participant identifier from the first participant device; |
| transmit an access code request message to an access server, the access code request message including the destination node identifier and a location identifier identifying a geographical location of the wireless apparatus; | [n/a] |

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| receive an access code reply message from the access server in response to the access code request message, the access code reply message including an access code based on the location identifier in the access code request message, the access code identifying a communications channel on a gateway through which communications between the wireless apparatus and the destination node can be conducted, the access code being distinct from the destination node identifier; and | [n/a] |
| initiate communications from the wireless apparatus, via the network interface, using the access code based on the location identifier, to establish communications between the wireless apparatus and the destination node through the communications channel identified by the access code. | [n/a] |
| [n/a] | using the first participant identifier to locate, via the at least one processor, a first participant profile from among a plurality of participant profiles that are stored in a database, the first participant profile comprising one or more attributes associated with the first participant; |
| [n/a] | determining a match when at least one of said calling attributes matches a portion of said callee identifier; |
| [n/a] | when at least one of the one or more attributes and at least a portion of the second participant identifier meet a first network classification criterion, producing, via the at least one processor, a first network routing message, the first network routing message identifying an address in the system, the address being associated with the second participant device; |
| [n/a] | when at least one of the one or more attributes and at least a portion of the second participant identifier meet a second network |

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| | classification criterion, producing, via the at least one processor, a second network routing message, the second network routing message identifying an address associated with a gateway to a network external to the system, wherein the second network classification criterion is met if the second participant is not registered with the system; and |
| [n/a] | when at least one of the one or more attributes meets a third network classification criterion, producing, via the at least one processor, an error message and causing prevention of the communication from being established. |